

WSRD Workshop

Artificial Intelligence & Wireless Spectrum: Opportunities and Challenges

Griffiss Institute - Rome, NY
August 28-29, 2019

Day1

- 9:00 AM** **Welcome:** Paul Antonik (Air Force Research Laboratory)
- 9:10 AM** **Opening Remarks:** Thyaga Nandagopal (NSF)
- 9:20 AM** **Keynote Speaker:** Mike Garris (NIST), *Today's AI and Spectrum – Realizing the Potential*
- 10:15 AM** Break
- 10:30 AM** **Opening Panel:** *The Current State of Artificial Intelligence*
- Mike Garris (NIST), *Moderator*
 - Kevin Compher (SEC)
 - Weng-Keen Wong (NSF)
 - Rebecca Willett (UChicago)
 - Bodhisatwa Sadhu (IBM Watson)
- 11:15 AM:** Open Discussion with Panelists
- 11:45 AM:** **Announcements:** Thyaga Nandagopal (NSF)
- 12:00 PM:** Lunch (on site)
- 1:15 PM** **Discussion Theme 1:** *Artificial Intelligence for Future Communications Networks*
- Breakout Topics**
- *Role of AI in network planning and resource provisioning*
 - *AI for network monitoring, diagnosis, fault mitigation and security*
 - *AI for heterogeneous network integration*
- 3:00 PM:** Break
- 3:30 PM:** **Discussion Theme 2:** *Artificial Intelligence for Dynamic Spectrum Allocation and Policy Management*
- Breakout Topics**
- *AI and ML Tools and Datasets for RF Spectrum Sensing, Processing & Readout*
 - *Automated Learning over large data-sets and time-horizons*
 - *Role of AI predictions in spectrum allocations*
- 5:00 PM:** Adjourn

Day 2

8:30 AM: Day 1 Summary Report

9:00 AM: **Keynote:** Paul Tilghman (DARPA), *The Spectrum Collaboration Challenge* (SC2)

9:40 AM: **Experiences Using AI for Spectrum Sharing** – Brent Josefiak (SC2 Competitor)

9:50 AM: **Plenary Q&A:** Paul Tilghman & Brent Josefiak

10:10 AM: **Discussion Theme 3:** *Artificial Intelligence for Spectrum Sharing*

Breakout Topics:

- *AI-enabled Peer to Peer Spectrum Sharing*
- *AI-enabled Spectrum Access Systems*
- *Validation, assurance and certification of AI-enabled spectrum sharing*

11:30 AM: **Plenary:** *Combined Assessment of Current Challenges and Path Forward*

12:30 PM: Closing Remarks